

Demographic

1.0 Demographic Program Area Overview

The Demographic program area conducts national surveys, produces population estimates and projections, and provides microdata and macrodata on population, income, poverty, housing, jobs, health, and other socioeconomic and demographic characteristics of the population in the United States and foreign countries. In addition, we provide statistical survey design, data collection and processing, and analysis services to the U.S. Census Bureau for the programs it sponsors and to other government agencies and private contractors on a reimbursable basis. We also provide content design, analysis, and dissemination of Decennial Census data. As an overall focus, the Demographic program area strives to deliver high quality data products, analysis products, and services, which can be and have been used to establish, evaluate, and support public policies.

To accomplish its work, the Demographic Programs Directorate is comprised of four divisions. The divisions and their responsibilities are described below:

Demographic Statistical Methods Division

The Demographic Statistical Methods Division ensures the quality and efficiency of the U.S. Census Bureau's demographic sample survey processes for their customers. The customers are survey sponsors for reimbursable surveys and in-house managers for U.S. Census Bureau-sponsored surveys. The duties, mathematical and statistical in nature, include the following:

- designing and selecting samples,
- developing weighting specifications and variance methodologies;
- developing procedures and controls necessary to carry out the sample selection;
- ensuring the quality and efficiency of the collection and tabulation of the survey data; and
- consulting federal sponsors of national surveys to ensure accurate survey design.

A major function of the Demographic Statistical Methods Division is to conduct the American Community Survey, an ambitious new survey we are developing to tell the demographic and economic stories of states, communities, neighborhoods, and population groups—**updated every year**. It brings efficiencies to the federal statistical system and will help to provide more of the type of data a modern nation demands.

Demographic Surveys Division

The Demographic Surveys Division conducts demographic surveys for the U.S. Census Bureau and for other agencies and organizations on a reimbursable basis; in effect, we “contract” with other divisions for work done on surveys. Working with survey sponsors, the Demographic Survey Division performs the following:

Continuous Measurement

Continuous Measurement is a re-engineering of the method for collecting detailed socioeconomic data, currently collected only once every ten years, and providing these data each year throughout the decade. It blends the strength of small area estimation from the census with the quality and timeliness of the continuing surveys. Continuous Measurement consists of two programs:

- **American Community Survey**
The American Community Survey will collect data as determined by the Decennial content process. Once the survey is in full operation, estimates will be provided each year for every governmental unit, for every component of the population, and for census tracts and block groups on a basis of refreshed multi-year accumulations. The survey will use the American FactFinder to disseminate its publication tables.
- **Small Area Income and Poverty Estimates**
This system creates small area income and poverty estimates for states, counties, and school districts; it provides updated income and poverty statistics needed to annually allocate approximately \$8 billion in federal funds to aid educationally disadvantaged students.

Current Population Survey

The Current Population Survey provides monthly estimates of employment, unemployment, and other characteristics of the general labor force, of the population as a whole, and of various subgroups of the population. The U.S. Census Bureau and the Bureau of Labor Statistics jointly sponsor this survey. The Bureau of Labor Statistics uses data from this survey to provide the official monthly estimates of employment and unemployment for the nation, as well as reliable estimates for all states and selected

metropolitan areas on an average annual basis. Data also are used to determine the distribution of funds under the Job Training Partnership Act.

In addition to basic labor force data, the survey is used as the primary vehicle to collect requested supplemental data; a prime example is the March Annual Demographic Supplement. This supplement is the official source of national estimates of income, poverty, and health insurance, as well as information on work experience and migration.

Current Population Survey Modernization

Recognizing that access to Current Population Survey data has been extremely difficult, we are developing improved data access systems for research, analysis, and public access. We have created and continue to expand the Federal Electronic Research and Review Extraction Tool (FERRET), an easy-to-use interactive system that provides ad hoc data extracts, tables and graphics from complex demographic survey data. The system will handle all the complexities of longitudinal data (i.e., data from the same person over a period of time) and the difficult weighting rules of multi-year household surveys, associated supplements, and topical modules. It will support internal data analysis, data preparation, and public Internet access. We will provide low cost, highly functional systems that can be used across all demographic surveys. In addition, FERRET will be the demographic surveys component of the U.S. Census Bureau's American FactFinder.

Decennial 100 percent and census sample files, federal income tax extracts, and data files from other federal social programs and agencies. In addition to providing income and poverty estimates, these data also provide migration statistics for state and local jurisdictions and are important in improving future Decennial Census coverage. Tables generated from these files are distributed to the general public and are used for planning and general research purposes.

International Reimbursable Programs

The Demographic program area collects, processes, analyzes, and disseminates information pertaining to the world population for other government agencies and private organizations on a reimbursable basis. Examples include:

- Asian Development Bank Program;
- Development of a Database of Scientists and Engineers in Selected Industrialized Countries Program;
- Estimates and Projections of the Population of Foreign Countries;
- HIV/AIDS Surveillance Data Base;
- International Data Base;
- International Training Program;
- Joint Resource Assessment Data System (World Population);
- Russian Subnational Population Projections; and
- Technical Assistance Program.

Sample Redesign

The 2000 Sample Redesign program provides research and redesigned samples for the post-2000 demographic surveys.

Survey of Income and Program Participation

The Survey of Income and Program Participation is a longitudinal survey (i.e., a survey about the same person over a period of time) that measures the economic well-being of the population as a whole, and profiles people receiving government benefits. The survey collects the source and amount of income received, program participation, eligibility data, and general demographic characteristics to measure the effectiveness of existing federal, state, and local programs. Data are used to determine future costs and coverage for programs such as food stamps, and provide statistics on national income distribution. This survey also allows analysts to measure the effects of changing demographics (e.g., divorce, birth of a child, etc.) or labor force status, and to draw conclusions about the effects of changes in government programs.

Survey of Program Dynamics

The Survey of Program Dynamics is a longitudinal survey authorized by the Personal Responsibility and Work Opportunity Reconciliation Act of 1996. This survey collects baseline and longitudinal data to provide an overall evaluation of how well welfare reforms are achieving the aims of Congress and the President, and how well they are meeting the needs of the American people. The survey began in 1997, and will follow respondents annually through 2002. It will simultaneously measure important features of the full range of welfare programs and other important social, economic, demographic, and family changes that will facilitate or limit the effectiveness of the reforms.

collected and released for the March Annual Demographic Supplement, and on school enrollment of the population from the October Supplement. Other supplements are conducted biennially or intermittently.

Demographic Reimbursable Programs

This program collects, processes, analyzes, and disseminates information for other government agencies on a reimbursable basis. Examples include the following:

- American Housing Survey;
- American Travel Survey;
- Consumer Expenditures Survey;
- National Crime Victimization Survey;
- National Prisoner Statistics Program; and
- Schools and Staffing Survey.

FERRET

The Federal Electronic Research and Review Extraction Tool (FERRET) provides Internet access to demographic survey data.

Housing Vacancy Survey

The Housing Vacancy Survey provides current information on rental and homeowner vacancy rates, homeownership rates, and characteristics of units available for occupancy. These data are used extensively by public and private sector organizations to evaluate the need for new housing programs and initiatives. In addition, the rental vacancy rate is a component of the index of leading economic indicators that the federal government and other forecasters use to gauge the current economic climate.

Intercensal Demographic Estimates

This service releases the Intercensal estimates for the nation, all states, counties, cities, towns, and townships.

International Reimbursable Programs

These programs collect, process, analyze, and disseminate information for other government agencies on a reimbursable basis. Some of their major programs are:

- **Asian Development Bank Program**
This program prepares research reports and provides technical assistance to support program reforms in China, such as the redesign of social security. This work draws on our estimates and projections of China's population and understanding of the economy.
- **Development of a Database of Scientists and Engineers in Selected Industrialized Countries Program**
This ongoing project, sponsored by the National Science Foundation, provides a compilation of educational and employment data on scientists and engineers in foreign countries. We hope to ultimately use these data for making international productivity comparisons.
- **Estimates and Projections of the Population of Foreign Countries**
Under this reimbursable program, we prepare estimates and projections for most of the world's countries.
- **HIV/AIDS Surveillance Data Base**
This database, supported by the U.S. Agency for International Development, is a compilation of all available HIV-prevalent information from Africa, Asia, and Latin America.
- **International Database**
This database, supported by the U.S. National Institute on Aging, the U.S. Agency for International Development, and other government agencies, provides detailed demographic and socioeconomic information about aged populations in the United States and other countries.
- **Joint Resource Assessment Data System**
Under contract to the Department of Defense, this program prepares data describing the spatial distribution of every country's population.

(continued)

Small Area Income and Poverty Estimates

This program creates and provides small area income and poverty estimates for states, counties, and school districts for use in allocating billions of dollars of federal funding.

Statistical Classification and Standards

The Office of Management and Budget has requested a fundamental, conceptually-based review of approaches as well as empirical evaluation on classification and standards for metropolitan areas, race, ethnicity, and occupations, which are central to maintaining an effective federal statistical system. The classifications receive widespread federal government use, including information dissemination and planning; employment, housing and voting rights law enforcement; and targeting distribution of billions of dollars in federal programs.

Survey of Income and Program Participation

The Survey of Income and Program Participation collects income sources and amounts, labor force information, program participation and eligibility data, and general demographic characteristics for measuring the effectiveness of existing federal, state, and local programs. This survey also estimates future costs and coverage for government programs such as food stamps and provides improved statistics on the national distribution of income.

Survey of Program Dynamics

This survey collects longitudinal data (from the same person over a period of time) on the demographic, social, and economic characteristics of a nationally representative sample of the U.S. population. This survey

permits the evaluation of the welfare reform legislation and its impact, over time, on the American people.

In conclusion, the Demographic program area provides survey methodology, data processing, data dissemination, and data analysis services for our internal and reimbursable customers. Specifically, we perform the following:

- collecting, processing, and disseminating information from surveys and censuses on the population and its characteristics;
- preparing the national population estimates and projections;
- collecting, processing, and disseminating the official national statistics on income, poverty, and health insurance;
- collecting, processing, and disseminating statistical data from surveys and censuses on the present and projected size and characteristics of the nation's housing, focusing on its use and occupancy;
- publishing a key economic indicator (the housing vacancy rate), along with a highly-watched policy measure (the homeownership rate);
- conducting surveys and special censuses, mainly funded by other government agencies, that focus on unemployment, crime, health, consumer expenditures, education, and other socioeconomic and demographic topics;
- publishing articles, monographs, and reports on socioeconomic and demographic characteristics;
- researching emerging issues and trends;
- conducting specialized studies of foreign populations, labor forces, economies, and statistical reporting systems;
- providing sampling frames and methodology to customers desiring new surveys during the decade;
- providing technical assistance and training in conducting censuses and surveys to foreign countries; and
- developing software to assist in taking, processing, and analyzing censuses and surveys around the world.

2.0 Demographic Program Area IT Support

As stated in section 1.0, the Demographic program area uses three computing environments to support our functions: Unisys mainframe, Dec VAX/VMS minicomputers (DISAR VAX Cluster), and UNIX workstations and servers. We have implemented a decentralized, distributed UNIX architecture. Each of our divisions has acquired, or is acquiring, the UNIX resources necessary to accomplish its program objectives and is managing and supporting its own UNIX environment. The UNIX environment is now the primary production and analytical processing resource; staffs are moving all work off the mainframe, and most work off the minicomputers, to the UNIX environment.

The Demographic program area will, in the next five years, expand its use of IT. For example, we are implementing/modernizing the Continuous Measurement Program, 2000 Sample Redesign, and various reimbursable surveys, while improving business processes. We are exploring, in conjunction with other directorates/divisions in the U.S. Census Bureau, new data collection and data entry methodologies; researching Graphical User Interface-based computer-assisted interviewing systems; and researching new technologies for address listing and updating. We are also increasing and improving customer access to demographic data via the Internet and FERRET, the demographic component of the U.S. Census Bureau's American FactFinder. Of course, these and similar modernization or improvement efforts require obtaining or developing additional IT resources such as computing equipment, peripheral devices, and improved application software.

Unisys Mainframe Equipment

The Unisys 4200 is the U.S. Census Bureau's legacy computer system; it is a central resource shared by various U.S. Census Bureau programs and managed and supported by the Bowie Computer Center.

DEC VAX/VMS Minicomputer Environment

The Demographic Interactive Survey Analytical Resource, a DEC VAX cluster, is a central resource shared by the Demographic program area and managed/supported by the Bowie Computer Center. It was originally installed in early 1988 to provide tools for end user data analysis. In the past, much production processing was moved from the Unisys to this cluster, so much so that it became a major production processing platform.

Demographic UNIX Environment

The Demographic program area has built a distributed network of UNIX workstations and servers for survey processing, analysis, and dissemination. We have implemented a distributed UNIX environment with one or more servers dedicated to each of our major programs, surveys, and/or activities, with each server sized and tuned to perform the designated activities.

Each division within the Directorate has implemented its own environment because of the types and volume of work each division processes. The Demographic Surveys Division processes many different surveys of varying size and complexity and answers to many different sponsors. As such, we have implemented servers sized and dedicated to each of their major programs or

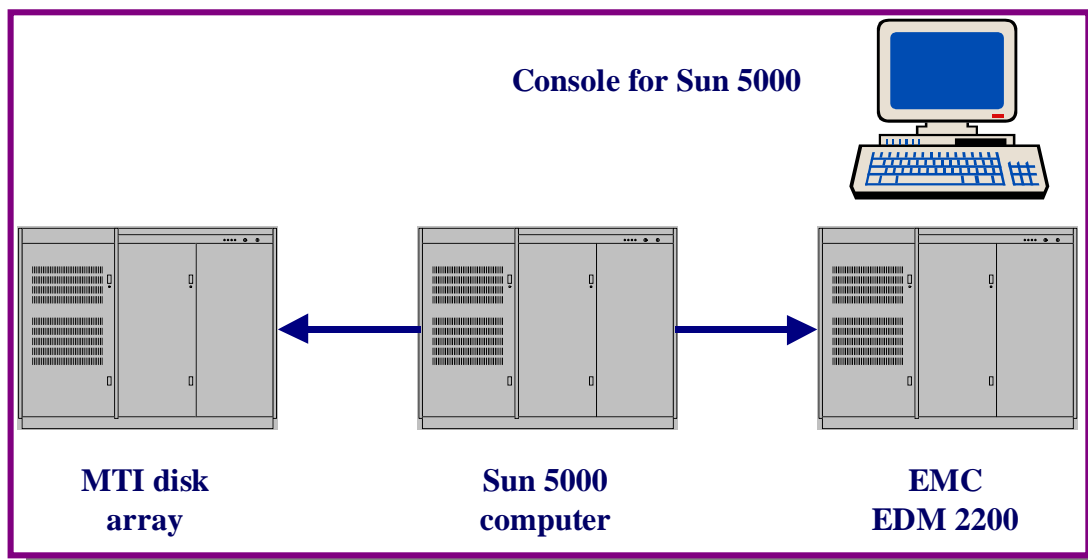


Figure 2: CMOSUN5-1 Computer at Headquarters, for American Community Survey Production Data Processing

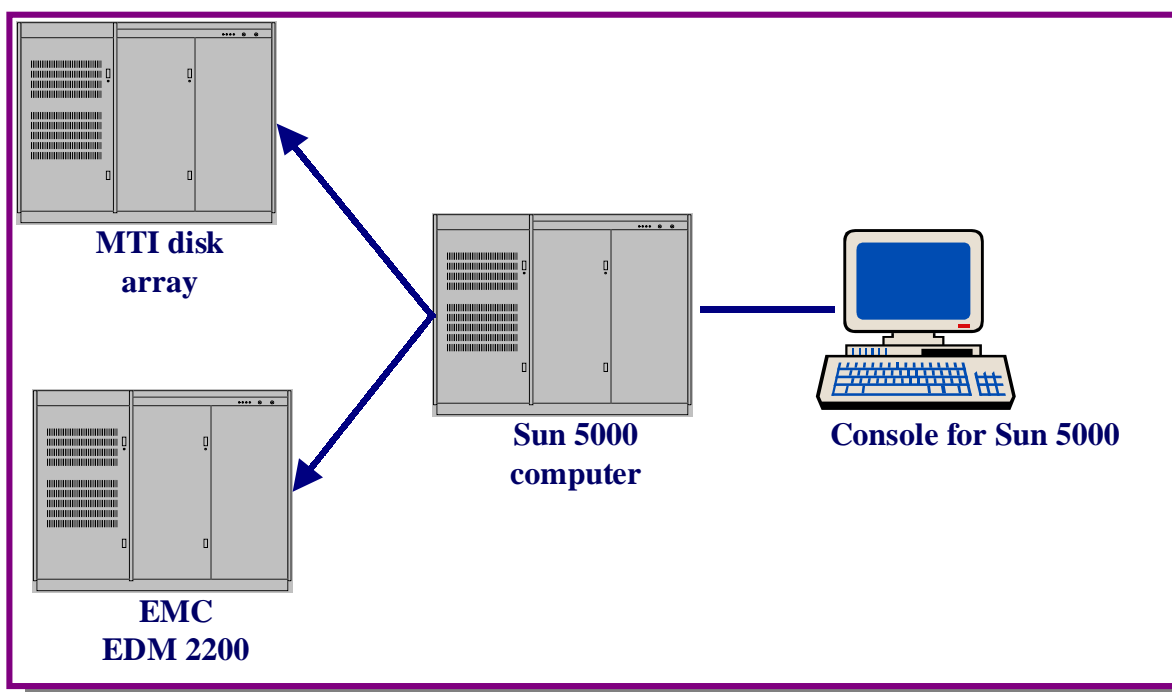


Figure 3: CMOSUN5-2 Computer at the Bowie Computer Center

on a daily basis, which compares the state of various system files to a known good state contained in a database; this database is also maintained on read-only media. The output from the Tripwire Program is electronically mailed to the Demographic Survey Division's system administrators and to the Internet staff in the IT Directorate on a daily basis and reviewed regularly. Questionable activity is noted and investigated.

The fourth subnet consists of three machines located at Headquarters. These machines are used by the Demographic Survey Division Computer Support Staff for system management activities and by the Survey Modernization Programming Branch for program development.

In addition to the above-named systems managed by the Demographic Survey Division, the Longitudinal Household-Employer Dynamics project has a dedicated Compaq Alphaserver 8400 system. This system is located in the Bowie Computer Center.

Housing and Household Economic Statistics Division: this UNIX processing environment consists of three Sun servers, one for the Small Area Income and Poverty Estimates (SAIPE) program, one for general division SAS processing, and one for file backup.

The SAIPE system supports the creation of small area income and poverty estimates for states and counties. Its main objective is to provide updated income and poverty statistics for administering federal programs and allocating federal funds to local jurisdictions. The existing SAIPE system resides at Headquarters; it consists of a Sun 1000e server, five 9GB SCSI disk drives, and one 4.2GB SCSI drive. The operating system software used is Solaris 2.6 and the main application software includes SAS and

Epoch Enterprise Backup. We expect to replace the system at the end of its lifecycle with a Sun 6500 server and a 1.1 TB RAID storage system during spring, 1999. This system moved to the Bowie Computer Center in spring, 1999.

The SAS processing system serves this Division's users. The staff compiles, analyzes, and publishes data on the physical, social and financial characteristics of the nation's housing, on its use and occupancy, and on the income, labor forces, and other socioeconomic characteristics of the nation's household, families, and individuals. The general division server supports processing for a variety of surveys but mainly for the March Supplement of the Current Population Survey and the Survey of Income and Program Participation. This server also contains microdata and analytical files for the American Housing Survey, American Community Survey, and 1990 Decennial Census. The SAS processing system also serves as the Division's Internet host.

The SAS processing system resides at Headquarters and consists of a Sun E4000 server, four Sun Sparc Storage Arrays, and nine 9GB SCSI disk drives. The primary software used is Solaris 2.6, SAS, and Epoch Enterprise Backup. This system also moved to Bowie in spring, 1999.

The file backup server uses Epoch Enterprise Backup version 5.0 software to perform full and incremental backups of the data on the SAS processing server and the SAIPE system. This system also resides at Headquarters. The total amount of backup data storage exceeds 250 GB. This system moved to the Bowie Computer Center in spring, 1999.

Figure 6, on the following page, illustrates these servers:

Common UNIX Architecture

Though the divisions have implemented independent UNIX environments, they have nevertheless implemented a common architecture that will help reduce costs, improve support, ensure compatibility, and enhance contingency planning.

Server Hardware and Operating System: the Demographic Directorate has standardized on a single vendor for its server hardware (Sun Microsystems) and operating system (Solaris).

File Backup Software: we have standardized on two products—Epoch (also known as Enterprise Data Manager) and Veritas.

Procedures and Policies: the divisions within the Demographic program area jointly develop and share, where appropriate, common system management procedures and policies.

Application Software: applications for survey processing and data analysis are mostly custom-developed in-house, using primarily SAS, Fortran, C, Oracle, SQL, and generalized support software routines developed within the U.S. Census Bureau.

We also are developing and implementing Internet and Intranet applications, in particular, several survey-specific Internet sites for FERRET access to demographic survey micro-, macro-, and metadata. Internet applications currently are developed primarily using C, PERL, HTML, and Java.

Application Development Tools: SAS is used extensively throughout the Directorate for survey processing. The Demographic Surveys Division is using Oracle CASE tools for the Survey of Income and Program Participation; developing a generalized parameter-driven tabulation system; for imple-

menting PVCS, a software configuration management tool, on a limited basis; and for researching change request/error reporting tracking software. The Demographic Statistical Methods Division is using BPWIN software to produce data flow diagrams and system flowcharts for the American Community Survey and 2000 Sample Redesign systems. They also use the database administration tool ERWIN for data modeling of the 2000 Sample Redesign System and documentation of their Oracle databases.

Database Software: we use two major database products, Oracle and Sybase. Oracle is used primarily for the Demographic Surveys Division's Survey of Income and Program Participation production processing, as well as the Demographic Statistical Methods Division's Sample Control System and Outputs database of current demographic sampling. Sybase is used for the U.S. Census Bureau/Bureau of Labor Statistics Current Population Survey shared data access system and FERRET.

Document Management System: the Demographic Directorate participated in an interdirectorate pilot to evaluate the PC Documentation System's (PC DOCS) capabilities for use as a document management system for their projects. The pilot proved that PC DOCS was not suitable for our requirements. Some of the major problems were the following:

- PC DOCS did not work properly in our environment—there were numerous hardware and software problems;
- simultaneous commenting did not work well; and
- there was no e-mail interface with cc:Mail.

Supporting a “Digital” Department of Commerce

The Demographic program area fully supports the move from paper to “digital” technology. We seek to produce more accurate and timely data through our collection efforts and provide customers with more choices for data access. In the following paragraphs, we discuss some of our efforts to support “Digital” Commerce.

We are making extensive use of Computer-Assisted Personal Interviewing (CAPI) and Computer-Assisted Telephone Interviewing (CATI) to collect data. A majority of the demographic surveys are now operating in a CAPI/CATI environment.

An Internet Computerized Self-Administered Questionnaire (CSAQ) application was tested using the Library Media Center Questionnaire. The Library Media Center, which collects information necessary for a complete picture of American elementary and secondary school libraries, is a component of the Schools and Staffing Survey. Some design and technical issues may have contributed to a low response rate in the test of the Internet CSAQ application; examples: the respondents required a special browser and multiple mailings were required to provide a user name and password. To the extent possible, we have simplified some of the issues and are going forward with plans to use Internet CSAQ to collect Library Media Center production data in 1999.

Research on Internet use for reporting is in the planning stages. A proposal currently is being evaluated to include in the Survey of Income and Program Participation a question asking the respondent if they would be willing to respond to the survey using the Internet. If the respondent answers “yes,” we may ask an additional screener question

to identify a highly skilled sample (e.g., scientists and engineers who should be more likely to accept Internet reporting methods). We would then give an Internet Computerized Self-Administered Questionnaire version to this sample. Later, we would conduct a follow-up interview to determine how the Internet reporting worked, what problems they had, and if they would still prefer to respond using the Internet. This proposal would give us the most optimistic view of how the Internet might work with demographic surveys.

We will be including a set of questions during the Survey of Income and Program Participation (August through November 1999) to determine how many respondents in the sample have a computer, have access to the Internet, and would use it to respond in the future if the option was offered. This will determine if in fact there is a “market” for developing Internet reporting instruments for one of the most complex demographic surveys.

The Federal Electronic Research and Review Extraction Tool (FERRET) currently provides Internet access to data from the Current Population Survey, the Survey of Income and Program Participation, and two National Center for Health Statistics surveys: the 1993 National Health Interview Survey and the National Health and Nutrition Exam Survey III (1988-1994)*. Because FERRET is designed to be used with any demographic survey data, it will be the demographic survey component of the American FactFinder.

* Note that we hope to increase the number of available data sets from the National Center for Health Statistics.

The New Construction and Automated Re-interview systems will remain on the VAX until they are replaced in 2004-2006 with systems created for the 2000 Sample

Redesign. Therefore, they may have to be migrated to an Alpha environment during this time period if the VAX technology is no longer supported.

2.1.3 UNIX Workstations and Servers

The Demographic program area's UNIX environment is their primary processing platform.

Except for those specific activities already identified as running in the Unisys and DEC environments, all Demographic activities run in the UNIX environment. Note that Demographic reimbursable programs are considered one activity for the purpose of this document.

2000 Decennial Census: the Population Division and the Housing and Household Economics Statistics Division perform detailed analysis and review of Census 2000 data and related products. Existing computing resources will be used for this analysis. Some resources may require minor augmentation, such as additional disks.

Continuous Measurement:

- **American Community Survey:** in 1999, the system will process over 1,000 master address files each cycle, and by 2002, will process every master address file in the country.
- **Small Area Income and Poverty Estimates (SAIPE):** this system supports the creation of estimates which are then used to allocate over \$7 billion in Title I compensatory education funds. In FY 1999, SAIPE will begin processing new files containing a 1% sample of individual Internal Revenue Service returns for tax years 1989 to 1990. Annual data releases are expected through FY 2005.

Current Population Survey (CPS): all monthly basic CPS and CPS supplemental processing, with the exceptions noted previously, was moved to the UNIX environment in FY 1999. The use of the database was eliminated in the basic CPS processing system. The new system, running on the UNIX platform, provided a significant decrease in wall time over the DEC VAX system: from 24 hours to 3 hours wall time.

Current Population Survey Modernization: staff continues to expand FERRET and increase the number and variety of data sets available.

Demographic Reimbursable Surveys: all existing and new reimbursable surveys, with the exceptions noted previously as running on the enterprise platforms, are processed on the UNIX platform.

Housing Vacancy Survey: housing vacancy survey data are collected through the Current Population Survey and processed (edits and imputations) along with the survey data.

Intercensal Demographic Estimates: this system re-tabulates the 1990 Decennial Census to the most current geographic boundaries. Components of population and housing changes are applied to the re-tabulated areas. Estimates of key demographic characteristics for states, counties, and sub-county areas are released to the public. The system will implement the Geographic Updates System in Support of Intercensal Estimates (GUSSIE) component. GUSSIE pro-

2.2 Demographic Program Area Progress Against Planned Milestones

Last year's Operational IT Plan presented program-related, versus IT-related, milestones for the Demographic program area. All activities relating to those program milestones were either completed or are on schedule.

Demographic Program Area Milestones, FY 98					
Description	Estimated		Actual		Progress to Date
	Start Date	Finish Date	Start Date	Finish Date	
No milestones to report					

Demographic Program Area Milestones, FY 99					
Description	Estimated		Actual		Progress to Date
	Start Date	Finish Date	Start Date	Finish Date	
Demographic Surveys Division Computer Systems Support					
Lifecycle replacement of UNIX System Management/DNS server	03/99	06/99		06/99	Completed.
Lifecycle replacement of UNIX print server	03/99	06/99		06/99	Completed.
Survey of Income and Program Participation					
Demographic Surveys Division: Lifecycle replacement of development UNIX server	04/99	07/99			On schedule.
Continuous Measurement					
American Community Survey: Purchase UNIX server for Master Address File Prep & Unit sampling	01/98	12/98		11/98	Completed.
American Community Survey: Create functional requirements for FY 2000 Processing	10/98	09/99	03/99		On schedule.
Small Area Income and Poverty Estimates: UNIX server replacement / Lifecycle upgrade	10/98	12/98	01/99	05/99	Completed.
Current Population Survey					
Demographic Surveys Division: Migration of data collection to Computer-Assisted Survey Execution Software system	07/97	01/99		01/99	Completed.
Demographic Surveys Division: Lifecycle replacement of Census/BLS Shared UNIX server	01/99	04/99	02/99	03/99	Completed.
Demographic Surveys Division: Migration of Industry & Occupation coding system from DEC to UNIX	01/98	04/99	08/98	06/99	Completed, delayed due to funding.

Demographic Program Area Milestones, FY 00					
Description	Estimated		Actual		Progress to Date
	Start Date	Finish Date	Start Date	Finish Date	
Demographic Surveys Division Computer Systems Support					
Lifecycle replacement of UNIX file backup server	04/00	07/00			
Survey of Income and Program Participation					
Demographic Survey Division: Lifecycle replacement of UNIX Internet Data Access Server	04/00	07/00			
Continuous Measurement					
American Community Survey: Scale Systems to address survey size as directed by budget process	09/99	10/99			
American Community Survey: Processing platform procurement	11/99	01/00			
Current Population Survey					
Demographic Survey Division: Lifecycle replacement of UNIX database server	04/00	07/00			
Demographic Survey Division: Lifecycle replacement of UNIX development server	04/00	07/00			
Demographic Reimbursable Surveys					
Migrate NCVS DEC VAX Processing to UNIX	01/00	04/00			
Lifecycle replacement of DSD/HSPB UNIX server	04/00	07/00			
Lifecycle replacement of DSD/NSCG/IPSB UNIX server	04/00	07/00			
Lifecycle replacement of DSD/CESPB UNIX server	04/00	07/00			
Lifecycle replacement of DSD/CSPB UNIX server	04/00	07/00			
Interscensal Demographic Estimates					
Census Special Processing: Unisys to UNIX Migration	01/97	12/99	01/98		Delayed due to staffing shortage.
Sample Redesign					
Purchase/upgrade UNIX server	01/00	06/00			
Research/purchase storage for archiving	05/00	09/00			

Demographic Program Area Milestones, FY 03					
Description	Estimated		Actual		Progress to Date
	Start Date	Finish Date	Start Date	Finish Date	
Demographic Surveys Division Computer Systems Support					
Lifecycle replacement of UNIX print server	04/03	07/03			
Lifecycle replacement of UNIX system management/DNS server	04/03	07/03			
Lifecycle replacement of Digital Linear Tape library #2	04/03	07/03			
Survey of Income and Program Participation					
Demographic Surveys Division: Lifecycle replacement of UNIX development server	04/03	07/03			
Continuous Measurement					
American Community Survey: Purchase/upgrade UNIX server for Master Address File prep and unit sampling	01/03	04/03			
Current Population Survey					
Demographic Surveys Division: Lifecycle replacement of UNIX development server	04/03	07/03			
Demographic Surveys Division: Lifecycle replacement of BLS UNIX production server	04/03	07/03			
Demographic Surveys Division: Lifecycle replacement of UNIX Industry & Occupation coding server	04/03	07/03			
Demographic Surveys Division: Lifecycle replacement of UNIX Internet server #2	04/03	07/03			
Lifecycle replacement of Census/Bureau Labor Statistics shared UNIX server	04/03	07/03			
Current Population Survey Modernization					
Lifecycle replacement of UNIX development server	04/03	07/03			
Demographic Reimbursable Surveys					
Lifecycle replacement of DSD/SSPB UNIX server	04/03	07/03			
Intercensal Demographic Estimates					
Lifecycle replacement of UNIX server	01/03	06/03			
Sample Redesign					
Purchase/upgrade UNIX server	01/03	06/03			
Purchase/upgrade archive management system	01/03	09/03			

corrupt data, or undermine public confidence in Census data confidentiality. Our Directorate staff continuously works with the ADP Security Branch to ensure that systems are adequately protected.

Another risk is the Bowie Computer Center's loss of the computer environment due to catastrophic events or acts of vandalism. Most of the systems are located in the Bowie Computer Center and in a controlled-access computer room in Suitland. We can handle the failure of most of our individual systems by transferring work to other machines. However, there are a few systems that have no practical long-term backup because of

their size and the volume of work on them. We will continue to work with the IT Directorate to ensure their disaster recovery plans adequately address our concerns and needs.

The last risk is inadequate performance from FERRET. It is essential that FERRET provide quick, responsive service to demographic data users. Unsatisfactory performance could turn away users and hamper our ability to persuade our reimbursable customers to use FERRET in disseminating their data via the Internet. We are constantly addressing performance issues through hardware, software, design, and implementation improvements.

2.5 Demographic Program Area References

The Demographic program area is supported by the following planning documents:

- **Budget Submission for FY 2001, dated June 1999;**
- ***UNIX System Supporting the Small Area Income and Poverty Estimates*, Requirement Initiative DMOG-9903, approved March 12, 1999;**
- **1999 Strategic IT Plan, dated December 18, 1998, pages 64-68, 94;**
- ***Longitudinal Household-Employer Dynamics Pilot Project*, Requirement Initiative DMOG-9902, approved September 21, 1998;**
- ***IT Resources for Sampling the American Community Survey*, Requirement Initiative DM01-9804, approved August 13, 1998;**
- ***UNIX Computer Server*, Requirement Initiative DM01-9702, approved January 27, 1997;**
- ***UNIX System Upgrade and Equipment*, Requirement Initiative DM01-9701, approved January 8, 1997;**
- ***UNIX Resources for Reimbursable Programs*, Requirement Initiative MS02-9602, approved August 18, 1996;**
- ***UNIX Resources for Welfare Reform Program*, Requirement Initiative DM01-9601, approved August 14, 1996;**
- ***IT Resources for Continuous Measurement*, Requirement Initiative IT01-9611, approved June 27, 1996;**
- **Memorandum for the Record: *UNIX in the Demographic Surveys Division*, dated June 13, 1996 (documents decision to move to a UNIX environment);**
- ***Computer System for Support of Intercensal and National Estimates*, Requirement Initiative DF03-9601, approved March 20, 1996; and**
- ***Disk for UNIX Migration*, Requirement Initiative IT01-9518, approved July 21, 1995.**

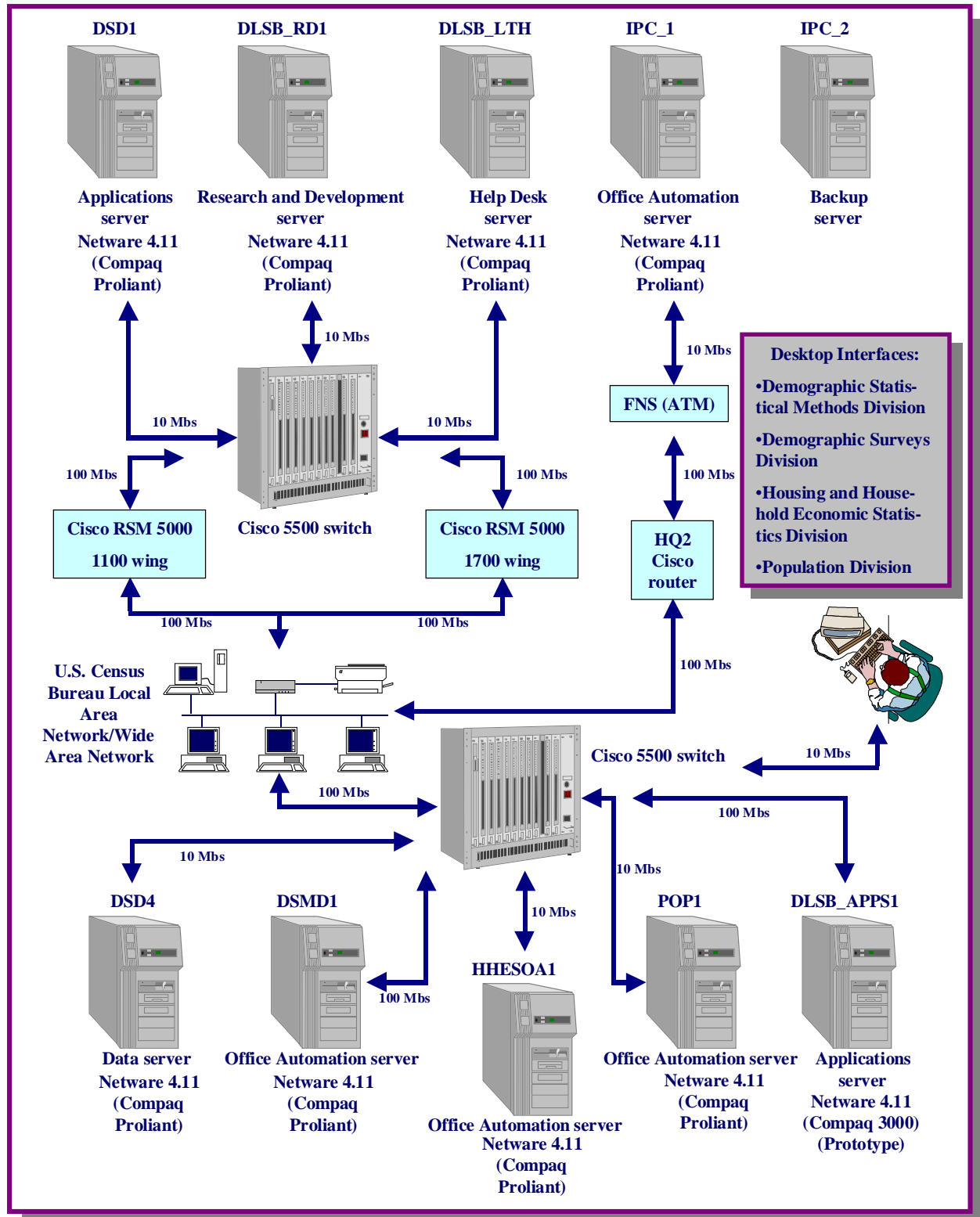


Figure 8: Current Demographic Office Automation/Local Area Network Infrastructure

3.1 Detailed Description of Demographic Program Area Infrastructure

Network Configuration and Communications Protocols: all devices are on an Ethernet LAN connected to the U.S. Census Bureau's Wide Area Network. We have one remote site organization: POP/International at Washington Plaza. All desktop connections are through twisted pairs running at 10mps. Selected PCs are connected via Cisco 5000 switches. Most devices are running at 10Mb; several of our Novell file servers and backup systems are running at 100Mb. The network architecture directly supports the Demographic programs by processing and disseminating survey data and by supporting office automation. TCP/IP is the primary protocol in use, and is used on all systems except the LAN file servers. The Novell file servers are running the IPX protocol.

Application Software: the Demographic program area uses a variety of software products to support its office automation activities. There currently are few standards within the Directorate, but we will move users to the standard software mandated by the U.S. Census Bureau.

Application Development Tools: the Demographic Directorate uses SAS extensively for survey processing activities on the PCs. Population Division's International area uses Visual Basic, Visual C++, and Visual dBase to develop their PC-based applications.

The following activities support the infrastructure:

- **Demographic Program Area PC/LAN Support:** This system provides IT support for the Demographic program area's PC and LAN environments, including hardware, software, and user support.
- **International Reimbursable Programs:** Program development and data processing activities for the various international reimbursable programs are conducted in the PC/LAN environment.

3.2 Demographic Program Area Infrastructure Progress Against Planned Milestones

Demographic Program Area Infrastructure Milestones, FY 98					
Description	Estimated		Actual		Progress to Date
	Start Date	Finish Date	Start Date	Finish Date	
No milestones to report					

Demographic Program Area Infrastructure Milestones, FY 03					
Description	Estimated		Actual		Progress to Date
	Start Date	Finish Date	Start Date	Finish Date	
Lifecycle replacement of web server	01/03	04/03			

3.3 Demographic Program Area Infrastructure Performance Measures

Last year's Operational IT Plan presented business-related, versus IT-related, performance measures for the Demographic

program area; we have modified our original performance measures to make them IT-related.

Demographic Program Area Infrastructure Performance Measures			
Performance Goals	Performance Measures	Target Performance	Current Performance
Gauge users' satisfaction with LAN service and support	Customer satisfaction	80% of respondents satisfied with overall LAN support	89% rated support good or better
Monitor LAN availability	server uptime	95% prime time	99.6%
Monitor help desk	Initial contact by user/technician	80% within 2 hours	No data available until Remedy Help Desk system implemented 09/99
	Call resolution	80% within 24 hours	No data available until Remedy Help Desk system implemented 09/99

3.4 Demographic Program Area Infrastructure Risks

One risk is obtaining qualified software developers and support staff. We must recruit, hire, and retain competent programmers and Local Area Network support personnel. This has proven difficult in the current competitive labor market because we can't compete in salary with private industry.

Another risk is performance of contracted maintenance vendors. If any contractor fails to repair a hardware problem that disables or disrupts the system, our staff will not be able to continue operations because of reliance upon the network for operations support.